

1014-O1-1579      **Michelle Reed\*** ([michelle.reed@wright.edu](mailto:michelle.reed@wright.edu)), Department of Mathematics, Wright State University, Dayton, OH 45435, and **Gretchen Whipple, Lynette Roller and Barbara Edwards.** *Student understanding of the Inverse Relationship of Exponential and Logarithmic Functions.* Preliminary report.

This talk describes an ongoing study of students' understanding of the inverse relationship between exponential functions and logarithmic functions. Data is being collected in three different institutions all using the Workshop Precalculus approach to teaching functions. The choice of institutions – a high school, a small private liberal arts college and a state university – gives a broad representation of students. All students were asked to complete an open response questionnaire prior to and following instruction. The responses are being analyzed using a coding scheme developed by the authors using preliminary data on students' understanding of function as well as results from prior research on understanding the concept of function. We will describe our coding scheme and discuss our preliminary results. (Received September 28, 2005)